

Remarks

Status of the Claims

Upon entry of the foregoing amendment, claims 1-4, 7-11, 14-16, 19-23, 26, and 28-31 are pending in the application, with 1, 8, 15, and 20 being the independent claims. Claims 1, 8, 15, 20, and 31 are sought to be amended. These changes should be entered after final as they raise no new issues and pose no new search requirement by the Examiner, and the changes place the application in condition for allowance and/or in better condition for appeal. Applicant believes these changes are only made to clarify the features already recited in the claims. Claim 27 is sought to be cancelled without prejudice to or disclaimer of the subject matter therein. Applicant reserves the right to prosecute similar or broader claims, with respect to the amended and/or cancelled claims, in the future. These changes are believed to introduce no new matter, and their entry is respectfully requested.

The claims presented in this Application should be interpreted solely based on the file history of this Application, not the file history of any predecessor or related application. With respect to this application, Applicant hereby rescinds any and all disclaimers of claim scope made in any parent application(s), any predecessor application(s), and any related application(s). The Examiner is advised that any previous disclaimer of claim scope, if any, and any references that allegedly caused any previous disclaimer of claim scope, may need to be revisited. Nor should any previous disclaimer of claim scope, if any, in this Application be read back into any predecessor or related application.

Based on the above amendment and the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Objection to the Claims

Claim 1

Claim 1 stands objected to because of various alleged informalities. Without acquiescing to the merits of this allegation, Applicant has amended independent claim 1 to accommodate the Examiner's objection. Accordingly, Applicant respectfully requests the objection to claim 1 be reconsidered and withdrawn.

Rejections under 35 U.S.C. § 112

Claims 8-11, 14-16, 19, 27, and 30

Claims 8-11, 14-16, 19, 27, and 30 stand rejected under 35 U.S.C. § 112, first paragraph, for allegedly failing to comply with the enablement requirement. Without acquiescing to the merits of this allegation, Applicant has amended independent claims 8 and 15 to accommodate the Examiner's rejection. Dependent claims 8-11, 14, 16, 19, 27, and 30 likewise comply with the enablement requirement for the same reasons as the independent claims from which they depend and further in view of their own respective features. Applicant respectfully request the rejection to claims 8-11, 14-16, 19, 27, and 30 under 35 U.S.C. § 112, first paragraph, be reconsidered and withdrawn.

Claims 20-23, 26, and 31

Claims 20-23, 26, and 31 stand rejected under 35 U.S.C. § 112, second paragraph, for allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. Without acquiescing to the merits of this allegation, Applicant has amended independent claim 20 to accommodate the Examiner's rejection. Dependent claims 21-23, 26, and 31 are likewise not indefinite for the same reasons as independent claim 3 from which they depend and further in view of their own respective features. Applicant respectfully requests the rejection to claims 20-23, 26, and 31 under 35 U.S.C. § 112, second paragraph, be reconsidered and withdrawn.

Rejection under 35 U.S.C. § 102

Claims 1-4, 7-11, 14-16, 19-20, 26, and 28-31

Claims 1-4, 7-11, 14-16, 19-20, 26, and 28-31 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by United States Patent Publication No. 2001/0012783 to Peeters et al. ("Peeters"). Applicant respectfully traverses the rejection and provides the following arguments to support patentability.

Different parameters relating individual carriers in a discrete multi-tone (DMT) communication system are stored and used for modem operations. (Specification, p. 2, lines 1-19.) Instead of storing each of the different parameters for each individual carrier, this Application groups carriers in a multi-carrier system and defines parameters relating to carrier groups rather than individual carriers. (Specification, p. 7, lines 24-26.) Specifically, this Application receives or determines different parameters for each

individual carrier of the multi-carrier system. (Specification, p. 8, lines 7-9.) This Application then analyzes the parameter data for each individual carrier and groups each individual carrier into carrier groups. (Specification, p. 8, lines 15-19.) This Application next determines a worst case parameter for each of the carrier groups and uses this worst case parameter to define a carrier group parameter for each of the carrier groups. (Specification, p. 9, lines 1-4.)

Peeters

Peeter discloses a multi-carrier system that groups multiple carriers, designated as f_0 through f_{4095} , in 8 carrier subsets, designated as SUBSET1 through SUBSET8. (Peeters, ¶ [0019].) Specifically, the multi-carrier system of Peeters measures the signal-to-noise ratio (SNR) for each of the multiple carriers f_0 through f_{4095} . (Peeters, ¶ [0019].) These SNR values are used to determine for each carrier subset SUBSET1 through SUBSET8, the number of bits that can be modulated on each carrier of this subset and the gain where each carrier of this subset should be transmitted with. (Peeters, ¶ [0019].) The bit values and gain values for each carrier subset SUBSET1 through SUBSET8 are next encapsulated in a constellation information message then transmitted over a telephone line. Nowhere does Peeters explicitly disclose that a worse case SNR of the individual carriers in each carrier subset SUBSET1 through SUBSET8 is one of the parameters of this constellation information message as recited by independent claims 1, 8, 15, and 20. Peeters merely discloses that the SNR values are used to determine the bit values and gain values that form the constellation information message, not that the constellation information message includes a worst case SNR of

each of the carrier subsets SUBSET1 through SUBSET8 as recited by independent claims 1, 8, 15, and 20.

Further, the Office Action alleges that each carrier subset SUBSET1 through SUBSET8 carries a different number of bits. (Office Action, p. 2.) Applicant respectfully disagrees with this characterization of Peeters. Peeters merely provides how the number of bits for each carrier subset SUBSET1 through SUBSET8 is determined. Peeters does not disclose any relationship between the bit values for each carrier subset SUBSET1 through SUBSET8. For example, no where does Peeters disclose that bit value B1 corresponding to SUBSET1 is different from bit value B2 corresponding to SUBSET2 as alleged in the Office Action.

In summary, Peeters does not teach or suggest at least the feature of "*least one of the plurality of carrier group parameters being a worst case parameter of the plurality of carriers within the at least one dynamically variable size carrier group*" as recited by independent claim 1. Independent claims 8, 15, and 20 each recite a substantially similar feature as independent claim 1 that is likewise not taught or suggested by Peeters. For a rejection to be sufficient under 35 U.S.C. § 102, "each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." M.P.E.P. § 2131. The absence of any claimed element from the reference negates anticipation. Atlas Powder Co. v. E.I. du Pont de Nemours & Co., 750 F.2d 1569, 1574 (Fed. Cir. 1984). The absence of these features from independent claims 1, 8, 15, and 20, therefore, precludes Peeters from anticipating these independent claims. Dependent claims 2-4, 7, 9-11, 14, 16, 19, 26, and 28-31 are likewise not anticipated by Peeters for the same reasons as the independent claims from which they depend and

further in view of their own respective features. Accordingly, Applicant respectfully request that the rejection of claims 1-4, 7-11, 14-16, 19-20, 26, and 28-31 under 35 U.S.C. § 102(b) be reconsidered and withdrawn.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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